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A letter was read from Prof. Haldeman, dated Columbia, Oct. 16, 1847, calling the attention to a collection of Birds and Reptilia for sale at Tampico, Referred to the Curators.

Mr. Gambel exhibited an albino specimen of the Wood Pewit, (*Muscicapa virens*) which was obtained in Liberty county, Georgia, by Mr. Wm. L. Jones, of that State, and also a specimen of a Woodpecker resembling *Picus pubescens*, but probably a new species. This last is remarkable in having only three toes, and would therefore more probably belong to the genus *Picoides* Lacép. (*Apternus*, Swains.) The feet are slender and delicate, without even a rudiment of a fourth toe; in other respects it more closely resembles the *P. meridionalis*, Swains. (*P. Gairdnerii*, Aud.) which is also an inhabitant of Georgia. It differs in having the bill more compressed at the base, the tips of the tertiaries without emarginations, the primaries narrower and more pointed, and in the toes being only three in number.

Meeting for Business, Oct. 26, 1847.

MR. PEARSALL in the Chair.

The committee to whom was referred Dr. Hallowell's paper, describing a new *Coluber*, reported in favor of publication in the Proceedings.

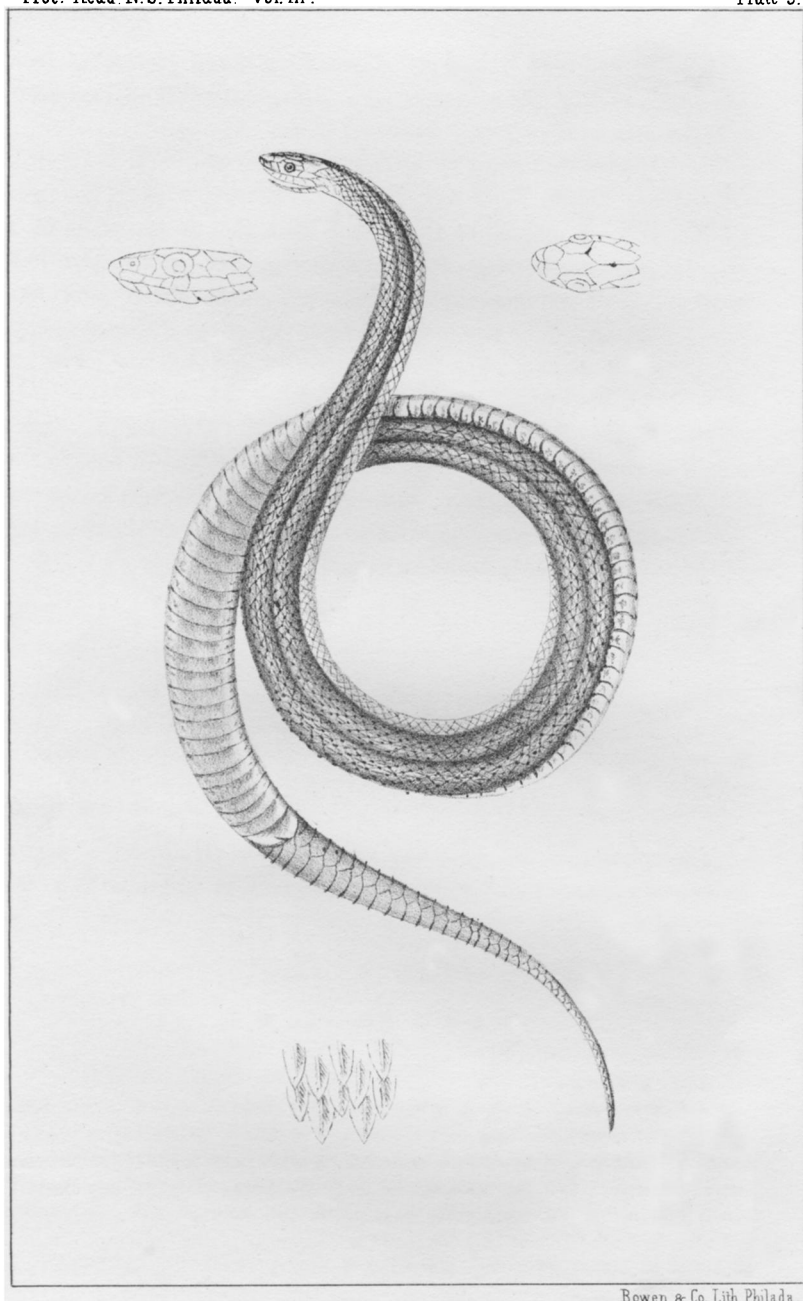
Description of a New Species of Coluber inhabiting the United States.

BY EDWARD HALLOWELL, M. D.

Coluber venustus.

Characters.—Head small, neck slender, color reddish-brown, with a dorsal ash-colored band extending from the occiput to near the extremity of the tail; four narrow bands of reddish-brown color from the neck to the commencement of the tail, with two intermediate bands of the same color, but less distinct; an ash-colored, band resembling that upon the dorsum, along each side of the abdomen; abdomen of a brick-red or copper color; tail short.

Description.—Head small, elongated, flattened above, covered with nine



Bowen & Co. Lith. Philada.

Coluber venustus.

plates; of these the vertical is pentagonal; the occipital are also pentagonal, their anterior margins being in contact with the vertical, supra-orbital, and superior post-ocular plates; the supra-orbital are pentangular, and in contact posteriorly with the occipital and posterior superior post-oculars, internally with the vertical, and anteriorly with the posterior frontal; their external margin forms the upper part of the orbit, and is in contact in front with the superior ante-ocular; they do not project beyond the eye; the posterior frontal are quadrilateral; the anterior frontal are smaller than those last described; their external and posterior angle is somewhat prolonged, passing in between the frenal and the posterior frontal plate; their anterior margin is rounded; there are two ante-ocular, and two post-oculars, of the posterior the superior is the larger; the frenal plate is quadrilateral; the nasal is single; the nostril, which is small, is placed near the posterior margin; the rostral plate is hexagonal, incurvated below; it is in contact with the anterior frontal, the nasal and the anterior labials; in the specimen examined there are six superior labials on one side and seven upon the opposite side of the head, exclusive of the rostral; of these the fifth is the largest; it is oblong quadrilateral; eyes of moderate size, placed upon the side of the head; neck slender, body rounded, contracted near the anus, thickest near the middle, covered with carinated scales; of these there are fifteen rows; these scales are bi-punctate posteriorly; the intervening epidermis is black; tail short and tapering to a point.

Colour.—Head brown above; irides —. An ash-coloured band extends along the dorsum, beginning at the occiput; it is narrow upon the neck, and broadest near the middle of the animal, where it measures one line and a quarter in breadth; it becomes narrow upon the tail, and is finally lost towards its extremity; two longitudinal bands of a reddish-brown colour extend along each side from the neck to the tail, the superior along the external margin of the ash-coloured dorsal band, the inferior along the lateral margin of the abdominal scuta; there is an intermediate band of the same colour, but less distinct; the spaces intervening between the bands are light brown; the chin is white, presenting numerous small conglomerate spots of a black colour upon its surface; the throat is also white, with blackish points, most numerous upon its sides; the neck, abdomen and under part of tail are of a brick-red colour; lighter upon the neck; an ash-coloured band, resembling that upon the back, extends along each side of the neck, and of the abdomen as far as the tail.

Dimensions.—Length of head 4 lines; greatest breadth $2\frac{1}{2}$ lines; length of body 9 inches, (Fr.) of tail, 2 inches 5 lines.

Abdomen.—Scuta 122. Subcaud. 41.

Habitat.—Michigan, near Copper Harbour, Lake Superior. This species was found by Mr. Theodore F. Moss, between stones upon the border of the lake, and presented by him to the Academy of Natural Sciences. The specimen had been preserved in alcohol two weeks.

No animal resembling the one I have described is figured in Prof. Holbrook's work on the "Reptiles inhabiting the United States," and I have therefore ventured to consider it as new.

Since the figure of this animal was printed, I have received, through the

kindness of Dr. Storer, the original of the *occipito-maculatus*,* which corresponds with the animal described in many particulars. The form of the head and neck is the same, as are also the plates immediately in front of the eye, which are two in number, the *Tripidonatus Dekayi*, with which it has been considered identical, presenting but one. The scales are likewise carinated and bi-punctate posteriorly, and the number of caudal and abdominal plates is nearly the same in both. The specimen of Dr. Storer, however, is much more slender, and the coloration is almost totally different, which, however, may be the effect of long immersion in spirits. We are inclined to the opinion, therefore, that notwithstanding the great difference in their size and coloration, the two animals are the same.

My friend Prof. Baird, to whom I exhibited the specimen brought by Mr. Moss, states that it is very abundant in the north, being, in fact, the most common snake along Lake Champlain. In Troy, he observes, "I have found one, and have a specimen from Georgia, at least given me as from that locality." It is certainly remarkable, that an animal having so wide a geographical distribution, and presenting the beautiful appearance which it does, should be so little known to naturalists.

The Committee on Mr. Conrad's paper, read 12th inst., reported in favour of publication in the Proceedings.

Observations on the Eocene formation, and descriptions of one hundred and five new fossils of that period, from the vicinity of Vicksburg, Mississippi, with an Appendix.

By T. A. CONRAD.

In the Spring of 1844, I collected about 109 species of Eocene fossils, most of which appear to be new species. There are 60 univalves, 42 bivalves, and 1 multivalve shell, and 6 or 7 polyps.

Of these fossils, I can identify two only with species of the Claiborne sands, *Infundibulum trochiformis* and *Conus saurodens*. Very few others are related to species of the Alabama sand strata; *Lucina Mississippiensis*, *Sigaretus Mississippiensis* and *Dentalium Mississippiensis*, are the only shells which might be confounded with species of those deposits.

The Vicksburg group contains three species of bivalves which have much resemblance to Miocene fossils of this country. *Lima staminea* approaches *L. papyria*; *Corbula engonata* is allied to *C. inequalis*, Say; and *Nucula Vicksburgensis*, to *N. obliqua*, Say.

I have not observed a recent species in this group, and yet it is decidedly more modern than that of the Claiborne sands; and as both deposits have but two species in common, I thought it advisable to designate the former, Upper or Newer Eocene, and the latter Lower or Older Eocene, as the two divisions are more distinct than the Older and Newer Pliocenes.

In the American Journal of Science and Arts, I have given a sketch of the

* Reports on the Ichthyology and Herpetology of Massachusetts, by D. Humphreys Storer, M. D., p. 230.

Mississippi Eocene, and observed that not* more than 10 species would be found, on comparison, identical with Claiborne shells. I had reference to the sand at Claiborne, and not including the limestone above it. A careful comparison has reduced the number to two species, for the *Dentalium*, which when at Vicksburg (without a Claiborne specimen for comparison) I had supposed to be *D. thalloides*, is a distinct, though closely allied species.

This newer portion of the Eocene in Mississippi is represented in Alabama by the white limestone at St. Stephens on the Tombecbe river, and the similar rock which constitutes the uppermost stratum at Claiborne, on the Alabama river; all being admirably connected by the abundance of *Nummulites Mantelli*. There is a similar limestone in Charleston County, South Carolina, in which I found *Scutella Lyelli* and *Pecten calvatus*, fossils of the Claiborne limestone, and both rocks are probably of the same geological age. The limestone of Tampa Bay, Florida, is included in the Upper Eocene series, but as yet no fossil has been obtained from it identical with a species of the Carolinas, Mississippi or Alabama, unless it is a specimen of *Carcharias megalodon*, which Capt. Powell, of the Navy, found on the bay shore.

The only species of *Crassatella* which occurs at Vicksburg, is more nearly related to *C. tumida* of the Paris basin than to *C. alta* of Claiborne.

Ostrea sellæformis characterises the lower division of the Eocene formation. It occurs abundantly beneath the fossiliferous sands of Claiborne; at Vance's Ferry, South Carolina: and on the right bank of James river, below City Point, Virginia. I also refer to this section, the localities at Fort Washington, Piscataway, and Upper Marlborough, Maryland. Other characteristic fossils are *Cardita planicosta* and *Turritella Mortoni*, the former occurring at Piscataway; at Claiborne, Alabama; and also at Marlbourne, on Pamunkey river, Virginia, the residence of Edmund Ruffin, Esq.

The following table illustrates the two editions of the Eocene:

DIVISIONS.	LOCALITIES.	CHARACTERISTIC FOSSILS.
Upper	Vicksburg, Miss., white limestone of St. Stephens, and of Claiborne, Alabama, and part of that in Charleston Co., South Carolina.	<i>Scutella Lyelli</i> . S——— Rogersi. <i>Pecten Poulsoni</i> . <i>Nummulites Mantelli</i> .
or		
Newer Eocene.	limestone in the vicinity of Tampa Bay, Florida.	<i>Nummulites Floridana</i> . <i>Cristellaria rotella</i> . <i>Ostrea Georgiana</i> .
.....		
Lower	Fossiliferous sands of Claiborne, and St. Stephens, Al. of the Washita river, near Monroe, La.; Pamunkey river at Marlbourne, and Eocene green sand, on James river, below City Point, Va.; Fort Washington, Piscataway, and Upper Marlborough, Md.	<i>Cardita planicosta</i> . ——— Blandinga. <i>Crassatella alta</i> . <i>Ostrea sellæformis</i> . <i>Turritella Mortoni</i> , &c.
or		
Older Eocene.		
.....		

*In the paragraph alluded to, this word was accidentally omitted. I did not, when it was written suppose that 10 fossils would be found to correspond with the species of the Claiborne sands.

The upper limestone of Shell Bluff on the Savannah river in Georgia, which contains *Ostrea Georgiana* and *Scutella quinquifaria*, overlies the strata which contain species of organic remains identical with those of the Lower Eocene of Alabama and Virginia, none of which has yet been found associated with the two characteristic fossils above named. On the other hand, the *Ostrea Georgiana* occurs at Jackson, Mississippi, where its position is said to be below the Vicksburg group. It is therefore the line of demarcation between the Upper and Lower Eocene.

FOSSILS OF THE NEWER EOCENE OF MISSISSIPPI.

Dentalium Mississippiensis.

Curved, attenuated above, longitudinally striated, the lines alternated in size, Length 2 1-10. Abundant. It differs from *D. thulloides*, nob., in having more numerous and much less prominent lines. It is very abundant.

There is another species which occurs in fragments. It is small, rare, and is smooth, polished and curved.

Fissurella Mississippiensis.

Suboval, rather elevated, with numerous unequal radiating lines, and fine transverse lines, giving a minutely granulated appearance to the shell; foramen oval, submedial. Length $\frac{1}{2}$, very rare.

An echinated species occurs apparently identical with *I. trochiformis* of Paris, and of Claiborne, Alabama.

Solarium triliratum.

Discoidal, with three thick approximate ridges on the periphery; suture channelled; volutions with oblique impressed lines, and 2 fine revolving lines on each whorl; base convex with three revolving impressed lines that near the umbilicus profound, and with coarse rugose transverse lines. Diameter 7-10. Not common.

Bulla crassiplica.

Cylindrical, narrowing towards the base, smooth and entire; fold at base thick and prominent. Length 2-10.

Abundant on Dr. Smith's plantation, 6 miles N. E. of Vicksburg.

1. *Cypræa sphæroides.*

Short ovate, subglobose; posterior end narrow; base rounded; aperture narrow, the margins with numerous teeth. Length 1 $\frac{1}{2}$.

Very rare. Mr. J. D. Anderson, of Vicksburg, found one, and I obtained only one during the two weeks employed in collecting the fossils around Vicksburg.

2. *Cypræa lineata.*

Ovate, elevated, ventricose, with four approximate equal impressed lines; base ventricose, profoundly striated; labrum margin much thickened, profoundly striated; summit of the labrum prominent; base slightly produced. Length 6-10. Rare.

Narica Mississippiensis.

Subglobose, revolving lines fine, regular, equal; longitudinal wrinkles very

minute, spire very short ; suture somewhat channelled ; umbilicus rather large. Length 4-10.

Sigaretus Mississippiensis.

Obliquely oval, with fine very closely arranged wrinkled revolving lines ; whorls convex ; no umbilicus. Length 8-10.

This species is usually much smaller than the specimen described, and scarcely differs from a species of Claiborne, Alabama. Not very common.

1. *Natica Mississippiensis.*

Subglobose, body whorl flattened above ; suture channelled ; spire little prominent ; base profoundly callous ; aperture moderate. Length 8-10.

This rare species I found about 7 or 8 miles N. W. of Vicksburg.

2. *Natica Vicksburgensis.*

Subglobose, whorls 4 or 5, convex ; umbilicus large ; columella straight ; labium callous. Length 6-10.

This species is common.

Scalaria trigintanaria.

Turreted, whorls convex, cancellated with numerous prominent lines, the longitudinal one lamellæform and elevated towards the suture, about 32 in number on the body whorl, which is obtusely carinated ; revolving lines equally prominent with the longitudinal, but thicker ; base below the carina with minute revolving lines. Length 9-10. Very rare.

Turritella Mississippiensis.

Subulate, volutions flattened, with seven revolving lines on the larger ones, the penultimate line large and prominent ; longitudinal wrinkles fine, approximate, much curved, crenulating the revolving lines ; the whorls near the apex generally with two prominent distant revolving lines, and a less prominent one margins the suture. Length 3 inches. Not abundant.

1. *Terebra divisurum.*

Subulate, with nineteen flattened volutions, obscurely turreted ; polished and with longitudinal curved ribs, dislocated by an impressed line above the middle of each whorl ; ribs obsolete on the body whorl below the impressed line. Length 2 inches. Common.

The ribs are sometimes obsolete on the larger whorls, or replaced by coarse wrinkles, which are generally distinct on the body whorl.

2. *Terebra tantula.*

Subulate, with longitudinal ribs dislocated by an impressed line ; whorls with minute revolving lines.

Very similar to the preceding, but narrower, far less in size, and distinguished by the revolving lines and by the ribs on the body whorl, which extend to the beak. Length $\frac{3}{4}$. Rare.

1. *Pleurotoma porcellana.*

Fusiform, smooth and polished ; whorls 11, convex, with two revolving lines near the upper margin ; the interstices transversely striated ; body whorl with

revolving impressed lines, commencing near the upper angle of the aperture; volution contiguous to the apex, papillated; labium striated; aperture rather more than half the length of the shell; beak perfectly straight. Length $1\frac{1}{4}$. Rare.

This shell may perhaps appertain to *Brachytoma*, Swainson.

2. *Pleurotoma Mississippiensis*.

Turreted; volutions eight, concave above and plain below, with longitudinal distant rounded ribs; body whorl with revolving lines, commencing in a line with the summit of the aperture; beak short, a little curved. Length $\frac{3}{4}$.

3. *Pleurotoma servata*.

Fusiform; whorls ten, with rounded longitudinal ribs and prominent strong revolving lines, a fine intermediate line on the body whorl; volutions concave above, with a carinated revolving line below the suture; beak narrow, elongated, slightly bent, acuminate; aperture and canal rather more than half the length of the shell. Length 9-10.

4. *Pleurotoma congesta*.

Short-fusiform, volutions nine or ten, with revolving raised lines and longitudinal wrinkles; spire conical-acute; whorls slightly contracted in the middle, with longitudinal curved irregular striae, interrupted in the middle of each whorl; aperture half as long as the shell; beaks slightly twisted. Length 1-10th. Very abundant.

It approaches the genus *Brachytoma*, Swainson.

5. *Pleurotoma cristata*.

Fusiform, whorls ten, angulated in the middle, except the two from the apex, and with a reflected finely dentate carina; revolving lines distinct, finely crenulated; spire scalariform; from the upper end of the aperture runs a prominent revolving line, much larger than the others: lines on the body whorl below the angle minutely granulated; beak narrow, produced. Length $\frac{3}{4}$. Rare.

6. *Pleurotoma tantula*.

Slender; volutions nine, convex, with longitudinal rounded, slightly curved ribs; spire elevated and acute; suture margined by an indistinct raised line; beak short, narrow. Length 4-10. Rare.

A member of subgenus *Clavatula*, Lam.

7. *Pleurotoma tenella*.

Fusiform; volutions nine, whorls slightly contracted above, with longitudinal prominent curved lines, and a prominent revolving line near and below the suture; between this and the suture an impressed line; body whorl with strong prominent revolving lines, commencing in a line with the upper end of the aperture, and sometimes alternated in size; ribs frequently obsolete on the body whorl, and terminating at the striated space; beak narrow, somewhat produced. Length 8-10.

It probably belongs to Swainson's genus *Clavicantha*.

8. *Pleurotoma cochlearis*.

Subfusiform, with elevated revolving lines, alternated with fine lines, the in-

terstices with fine longitudinal wrinkled lines; spire elevated, acute; beak narrow, straight. Length $1\frac{3}{4}$. Very rare.

The specimen figured is more than twice the size of any other specimen found, though it is an abundant species.

9. *Pleurotoma eborides*.

Turreted; whorls nine, smooth, flattened above, obscurely nodulous or subcostate below; beak short. Length 6-10.

10. *Pleurotoma abundans*.

Turreted: whorls ten, concave above, with a crenulated prominent revolving line just below the suture; convex portion of the whorls with prominent, acute, nearly straight ribs and regular revolving lines; concave portion with minute revolving lines; beak narrow, slightly produced. Length $\frac{3}{4}$.

It belongs to subgenus *Clavatula*, Lam.

11. *Pleurotoma rotædens*.

Narrow-subfusiform, small, with a profound deeply crenulated carina on the body whorl and in the middle of each whorl of the spire; suture margined with a prominent line below and a minute one above; large volution with distinct revolving lines and minute longitudinal wrinkles; beak slightly produced, narrow, straight. Length $\frac{1}{2}$. Rare.

12. *Pleurotoma decliva*.

Fusiform, with subangular volutions, with strong prominent revolving lines on the body whorl, alternated in size; the whorl flattened and oblique above the angle, with four unequal revolving lines; lower whorls of the spire with three prominent revolving lines on the lower half, and a fine intermediate line; upper half with three minute revolving lines, and a larger prominent one below and near the suture; aperture and canal half the length of the shell. Length 1.

Allied to *P. servata*, but wants the longitudinal ribs of that species. Rare.

Phorus humilis.

Depressed; volutions five, with comparatively large shells and fragments adhering: body whorl very wide, much depressed; base flat; near the periphery concave. Width 8-10. Height $\frac{1}{4}$.

I found but one specimen of its shell, which seems to be less elevated than the other species.

Buccinum Mississippiensis.

Turreted; whorls eight, three from the apex smooth and entire; the others with longitudinal regular distant ribs and intermediate wrinkles; revolving lines raised, alternated in size: labrum with eleven raised lines within, not extending to the margin; columella striated. Length 5-10. Common.

Typhis curvirostratus.

Subfusiform; volutions 8, scalariform, varices or ribs profound; tubes long; that near the margin of aperture thick, elongated, beak elongated, spiniform, much curved. Length 1-10. Not uncommon.

Murex Mississippiensis.

Subfusiform, with three elevated varices, and an intermediate prominent obtuse longitudinal ridge; between two of the varices on the body whorl is a smaller ridge; revolving lines prominent, alternated in size, profound on the varices; longitudinal wrinkles distinct; labium with six prominent lines within, the margin regularly foliated; canal long. Length, 1 7-10.

North American, uncommon. It belongs to the subgenus *PHYLLOXOTA* of Swainson.

Melongena crassi-cornuta.

Fusiform: whorls concave above, and having a series of thick prominent nodes on the angle of the whorls; on the body whorl they are very large and thick, becoming spines towards the mouth, that nearest the margin a very thick, long, recurved spine; towards the base is a series of thick short spines, revolving lines coarse, unequal, not very prominent, waved; longitudinal wrinkles coarse and distinct. Length of fragment 3.

I found but one specimen of this fine shell, and cut off the base in digging it out of the clay.

The genus *MELONGENA* has no affinity with the type of *PYRULA* of Lamarck (*FULGUR* of Montford.) Its true position will probably be among the *PURPURINÆ*. I have referred to this genus the *Fusus corona* of Lamarck. The species have a remarkable sinus at the upper end of the labrum.

1. *Fusus spiniger.*

Fusiform, with revolving lines, and a series of elevated acute spines on the angle of the large whorl; the series continued on the whorls of the spire near; the suture; two upper whorls entire; sides above the tubercles flattened, with the revolving lines fine and indistinct; volutions seven; beak produced; labrum striated within. Length $1\frac{3}{4}$. Very rare.

It belongs to the genus *Hemifusus* of Swainson.

2. *Fusus Mississippiensis.*

Narrow-fusiform; volutions eight or nine, convex, with distant profound, rounded ribs, and fine regular ornamental wrinkles; canal much longer than the aperture; labrum striated within: beak narrow, produced, slightly bent. Length $1\frac{3}{4}$.

3. *Fusus Vicksburgensis.*

Fusiform; whorls convex, with revolving raised lines alternated in size, and fine longitudinal wrinkled lines; large whorl ventricose; beak somewhat bent. Length $1\frac{1}{2}$.

Ficus Mississippiensis.

Pyriform, thin and fragile, latticed, with acute prominent lines, the revolving one largest and distant, the interstices with minute revolving lines; longitudinal lines closely arranged, equal; spire very short, whorls convex, the two nearest the apex entire; large volution flattened at top. Length $1\frac{1}{4}$.

Chenopus liratus.

Ovate, with a thick dilated labrum; whorls nine, convex, ribbed longitudinally, and with revolving lines; ribs curved, undulated on the body whorl and subnodose above; body whorl gibbous; aperture narrow; callus of the labium profound. Length $\frac{3}{4}$. Very rare.

I have adopted the above generic name because, as Phillipi observes, the *Pterocera lambis* was made the type of the genus *Apoorhais*.

Ringicula Mississippiensis.

Ovate acute, whorls five or six, convex, with minute revolving lines; suture profound, margin carinated by a submarginal impressed line; columella two-plaited. Length 1-10. Abundant on Dr. Smith's plantation near Vicksburg.

Actæon Andersoni.

Oblong subovate; whorls six, with regular impressed revolving lines, interstices minutely striato-punctate; spire acutely conical, whorls convex; lines on the shoulder indistinct; aperture about equal to half the length of the shell. Length 4-10.

An elegantly formed and very rare species, dedicated to James D. Anderson, Esq., of Vicksburg, who first collected the fossils of that locality and studied the species.

1. *Cancellaria Mississippiensis.*

Subovate; whorls five or six, turreted; ribs prominent, ten or eleven on the large volution, one or two considerably larger than the others; revolving lines raised, distinct, alternated in size on the lower half of the body whorl; labrum striated within; columella concave, three-plaited. Length $\frac{1}{2}$.

2. *Cancellaria funerata.*

Oblong ovate with large longitudinal ribs and prominent revolving lines; spire rather elevated, turreted, whorls six, convex; two from the apex entire; ribs on the body whorl profound, unequal; labrum with nine prominent lines within, not extending to the margin; columella three-plaited. Length $\frac{1}{2}$. Very rare.

1. *Triton crassidens.*

Subfusiform, a little distorted; spire acuminate; whorls latticed, the longitudinal ridges rather distant, prominent; body whorl with the longitudinal ribs distant, and on the angle some of them very prominent or subtuberculous; labrum with one large thick prominent tubercle, and with transverse plaits and grains: columella profoundly excavated; canal short. Length 1 6-10.

I have given the name of *crassidens* to this species to distinguish it from *T. cancellinus*, the large tooth on the labrum being very thick and prominent. The large plait on the upper part of the labium is much smaller than the corresponding one in *cancellinus*. It differs in other particulars though the two species are nearly allied.

2. *Triton abbreviatus*.

Short-subovate: whorls six, longitudinally ribbed, and with strong alternated revolving lines; whorls of the spire slightly convex, the two nearest the apex entire, rounded; body whorl inflated, and having one large varix; the ribs about fifteen in number; submargin of labrum denticulate; canal short, oblique, straight, aperture and canal about half the length of the shell. Length 4-10.

3. *Triton Mississippiensis*.

Acutely subovate; volutions six or seven, latticed, the longitudinal and revolving lines subequal; one varix on the large volution opposite to that on the submargin of the labrum, both elevated and narrow or subcompressed: two varices narrow and prominent on three whorls of the spire; submargin of labrum with six teeth; columella with five transverse plaits, and two or three near the upper angle of aperture. Length $\frac{1}{2}$ nearly.

Of this species I obtained one specimen only.

Cassidaria linteae.

Elliptical, with fine closely-arranged revolving lines, crossed by finer longitudinal lines, most distinct towards the margin of the labrum; spire prominent, acute, cancellated; penultimate whorl slightly tuberculated at base; angle of large whorl with unequal small tubercles, wanting towards the labium margin; labium striated above, and with rugose plaits below; submargin of labium striated within, margin entire. Length $1\frac{1}{2}$.

1. *Cassis cœlatura*.

Short-elliptical, with revolving lines and series of nodes and granules; tubercles profound on the angle of the body whorl; spire prominent, whorls cancellated; the upper half with a profound revolving line; labium granulated and striated throughout, the upper grains indistinct; labrum with transverse prominent lines. Length $1\frac{1}{2}$.

2. *Cassis Mississippiensis*.

Subovate; whorls slightly concave above, the angle nodular; body whorl indistinctly ribbed or waved; revolving lines distinct but fine; body whorl with one sharp compressed varix or carina; apex papillated; pillar with transverse rugose plaits throughout; submargin of labrum regularly and profoundly dentate. Length 9-10. Very rare.

Oniscia harpula.

Obovate, latticed; longitudinal ribs angular, distant, about ten on the large whorl, with a slightly foliated and waved margin; revolving lines large, distant, about twelve on the body whorl; spire scalariform, the ribs divided by an impressed line; submargin of labrum obtusely dentate. Length 1 2-10. Very rare.

Fulgoraria Mississippiensis.

Elliptical, volutions nine, fluted, the ridges distant, acute, and generally one or two of them large, thick and very remote from each other, on the body whorl; spire conical, acute; aperture auriform; columella with nearly equal plaits; not oblique; labium thick, with a sharp margin. Length $1\frac{1}{2}$. Common.

Oliva Mississippiensis.

Subelliptical; volutions six and a half; on the middle of the body whorl is a slightly impressed revolving line. Length 1 1-10. Usual size $\frac{3}{4}$. Abundant.

1. *Mitra conquisita.*

Fusiform, slender, smooth and polished; whorls eleven, slightly convex; penultimate whorl entire, except at the summit, where there are two impressed lines forming a raised line between them; the other whorls of the spire with revolving lines, and towards the apex the intervening spaces transversely wrinkled; apex acute; body whorl above the aperture, except the lines near the suture, without striæ; inferiorly striated; aperture narrow; labium 3-plaited. Length 1 4-10. Very rare.

2. *Mitra Mississippiensis.*

Narrow-fusiform, with eight whorls, flattened at the sides and slightly scalariform; whole surface with revolving unequal lines and longitudinal fine wrinkles, obsolete on the lines but distinct on the intervening spaces; aperture more than half the length of the shell; columella 3-plaited. Length $1\frac{3}{4}$. Rare.

In the young shell the striæ are prominent over the whole surface, but in adult specimens they become slightly impressed lines on the ventricose portion of the body.

3. *Mitra cellulifera.*

Elevated-subfusiform; slender; whorls slightly turreted; longitudinally ribbed; interstices with transverse impressed lines, resembling punctæ or cells; beak produced; labium 4-plaited, the second one from the top divided by a slightly impressed line. Length $\frac{3}{4}$. Rare.

4. *Mitra staminea.*

Elliptical, whorls eight, slightly turreted, longitudinally ribbed; ribs small, numerous; whorls with distinct impressed revolving lines; body whorl ventricose; aperture about half the length of the shell; pillar 4-plaited, the three upper ones nearly equal. Length 4-10.

5. *Mitra Vicksburgensis.*

Elliptical, small; whorls slightly convex, with fine longitudinal ribs, obsolete towards the suture inferiorly and wanting on the lower half of the body; suture profound; aperture more than half the length of the shell; pillar 4-plaited, the three upper ones nearly or quite equal in size.

Distinguished from the preceding by wanting the revolving lines, and in being wider in proportion to its length. 3-10.

Caricella demissa.

Subfusiform; whorls six, convex, one or two whorls near the apex distinctly striated longitudinally, and with minute revolving lines; upper part of the whorls slightly concave; apex papillated, first and second volutions smooth, entire; beak striated; aperture about two-thirds the length of the shell; columella 4-plaited. Length $1\frac{3}{4}$.

Scobinella.

Shell subfusiform, with a deep angular sinus in the labrum as in *Pleuro-*

toma; spire long, turreted; pillar lip wanting; columella with plaits decreasing in size downwards, as in *Mitra*; canal short.

Scobinella cælata.

Subfusiform; volutions eleven, slightly scalariform, with longitudinal irregular ribs and revolving impressed lines; ribs interrupted on the spire by a tuberculated convex space; suture margined by a row of fine tubercles or grains; labium with four, rarely five plates. Length 1 3-10.

This singular shell is perhaps more nearly related to *Pleurotoma* than to *Mitra*. The plates in most specimens resemble those of the latter genus, but in one instance where there are five plaits, the middle is the largest and thickest, the lowest one being minute.

1. *Turbinella Wilsoni.*

Fusiform; spire elevated, acute, volutions ten, angular, nodose, the larger volutions somewhat concave above; the upper volutions with revolving lines, obsolete or wanting on the lower ones; beak with coarse, slightly raised revolving lines; aperture narrow; columella with three rather distant compressed plaits, the middle one largest; canal long. Length 5 inches.

The young of this species has distinct lines on every part of the shell, except on the large portion of the body whorl, where they are indistinct and remote. This species is named to commemorate the scientific zeal of Dr. Thomas B. Wilson. It is rare, and generally very imperfect.

2. *Turbinella protracta.*

Fusiform, with about nine volutions, with thick, prominent, longitudinal ridges, and revolving, thick, prominent lines, with a fine intervening line; longitudinal wrinkles distinct; whorls concave above; spire elevated, acute; columella with four plaits, the lower one dentiform; canal long; labrum striated within. Length 1 5-10.

3. *Turbinella perexilis.*

Narrow-fusiform, with convex volutions, having large, rounded, longitudinal ribs, about six on the large whorl; revolving lines strong, prominent, distant, with a fine intermediate line; longitudinal wrinkles minute and ornamental; aperture narrow; labrum striated within; columella with two large plaits; beak long and narrow. Length 1.

Distinguished from the preceding by its narrower outline, fewer and larger plaits on the pillar, &c. It is probably a much smaller species, but as I have one specimen only, its greatest size cannot be determined.

Panopæa oblongata.

Elongated, very inequilateral, ventricose; extremities rounded: umbo prominent, undulated; valves slightly contracted at base in a line with the umbones: valves gaping at both ends. Length $3\frac{1}{2}$.

Occurs in its original vertical position generally with connected valves, but it is extremely friable and difficult to obtain.

1. *Mactra Mississippiensis.*

Subtriangular, equilateral, very thin and fragile, plano-convex, dorsal margin

very oblique, nearly straight, extremity acutely rounded, much above the line of the base, which is regularly curved; summit prominent; lunule elongated, defined by an impressed line; umbonial slope nearly terminal, angulated and carinated by a thin line. Length 1 8-10. Height 1 4-10.

Proportionally more elevated than *M. prætenus*, of Claiborne, Alabama, and a much larger species. Rare.

2. *Mastra funerata*.

Triangular, small, convex; much longer than high, equilateral; posterior end angular. Length 3-10. Rare.

Amphidesma Mississippiensis.

Oblong-oval, somewhat compressed, inequilateral, smooth, with a few distant concentric impressed lines; posterior side with a slight fold, end obtusely rounded; anterior end rounded; cartilage pit very narrow, elliptical; lateral teeth in the right valve distinct, in the left wanting? Length 1 1-10. Height 7-10.

1. *Psammobia papyria*.

Oblong-oval, or somewhat rhomboidal; very thin, compressed; posterior side rather wider than anterior; and posterior to the umbonial slope, which is undefined, there are concentric lamellæform lines; anterior margin obliquely rounded; dorsal margin parallel with the base. Length 1½. Rare.

2. *Psammobia lintea*.

Oblong, compressed, with rather fine, very regular concentric lines closely arranged; anterior margin acutely rounded, the extremity in a line above the middle of the valve; posterior side shortest; hinge line rectilinear, oblique; posterior side with acute lines larger and more prominent than those of the middle and anterior side; umbonial slope subangular. Length 1¼. Rare.

Crassatella Mississippiensis.

Ovate-trigonal, inequilateral; thick and ponderous; surface coarsely striated; summits flattened, sulcated; umbo plano-convex, with numerous sulci, obsolete behind the umbonial slope, which is angulated and subcarinated above; posterior extremity truncated, direct; basal margin slightly contracted anterior to the umbonial slope; inner margin crenulated. Length 3. Common.

This species is variable in outline, and allied to *C. tumida* of the Paris basin.

1. *Cardium eversum*.

Ovate, elevated, subequilateral; ventricose, thin, with numerous approximate, slender, rounded ribs distinctly crenulated anteriorly towards the margins; umbonial slope subangulated; posterior extremity subtruncated, direct; summit very prominent; ribs crenulated on the sides, in the middle of the valves, or finely aculeated. Height 1 2-10. Length not quite as much. Rare.

2. *Cardium glebosum*.

Ovate, ventricose, with numerous flat ribs, slightly carinated on the margins and numerous approximate, prominent arched scales. Height 1¼.

Rare, and obtained only in fragments.

3. *Cardium diversum*.

Trigonal, ventricose, subequilateral, thin, with concentric lines and more approximate, fine, but obtuse radiating lines; umbonial slope rounded, and the posterior space from the umbonial slope with profound radiating striæ; posterior side slightly waved or contracted; summits very prominent; basal margin rounded in the middle, contracted posteriorly: posterior extremity subtruncated; inner margin densely crenate. Height 1 2-10. Length 1 3-10. Abundant.

Allied to *C. Niccolleti*, nob. When viewed through a magnifier, the interstices of the concentric lines have a singular imbricated appearance.

4. *Cardium Vicksburgense*.

Cordate, ventricose, with about twenty-four ribs; angular and profound; towards the anterior margin obsolete; summit prominent; nearest the anterior end; anterior margin nearly straight and direct; posterior end subtruncated. Height 3-10. Length 4-10 nearly. Rare.

1. *Tellina pectorosa*.

Subtriangular, elevated, smooth and polished; ventricose; beaks medial; anterior end obtuse, rounded; posterior side somewhat cuneiform, with a slight wave or fold; basal margin profoundly rounded. Length 6-10. Height 5-10.

2. *Tellina serica*.

Elliptical, inequivalved; beaks nearest the posterior end; concentric lines very minute and closely arranged; anterior side slightly bent or reflected. Length 7-10.

3. *Tellina Vicksburgensis*.

Triangular, small, with regular minute concentric lines; anterior end rounded; posterior submargin angular or obscurely carinated, the end obliquely truncated; posterior side shortest, and slightly bent or waved; lateral teeth in the right valve only. Length 3-10. Height $\frac{1}{4}$.

Donax funerata.

Triangular, small, convex, with obsolete radiating lines; anterior side short, end truncated, direct; margin within finely crenulated; lateral teeth none. Length 3-10.

Very rare. I found it about 8 miles N. E. of Vicksburg.

1. *Cytherea Astartiformis*.

Trigonal, elevated, ventricose, subequilateral, with numerous regular concentric grooves and obtuse ridges; lunule not defined; summits prominent; umbo flattened. Length 6-10. Height $\frac{1}{2}$.

This shell has a remarkable resemblance on the exterior to some species of *Astarte*. Rare.

2. *Cytherea imitabilis*.

Cordate, inequilateral, plano-convex, with numerous concentric prominent acute ribs; extremities rounded; basal margin regularly curved; lunule ovate, defined by an impressed line. Length 1 7-10. Height 1 3-10. Common.

3. *Cytherea Mississippiensis*.

Subtriangular, ventricose, elevated, with prominent concentric acute ribs, rather distant, and with irregular intervals and fine intermediate lines: posterior margin somewhat curved; basal margin profoundly rounded; summits prominent; inner margin entire. Length $1\frac{1}{4}$. Height the same nearly. Rare.

4. *Cytherea sobrina*.

Subovate, ventricose, polished; with rather obtuse irregular distant, concentric, impressed lines; umbo entire; extremities rounded; base regularly curved. Length 1 1-10. Height 9-10.

Very abundant. Almost always with disunited valves. It is quite thick on the anterior side towards the summit.

5. *Cytherea perbrevis*.

Ovate-triangular, elevated, ventricose: the posterior and anterior margins equally declining and very oblique, the anterior one straight, the posterior slightly curved; beaks medial; surface with numerous regular impressed lines; basal margin rounded. Length and height 6-10.

It is of the size, and has somewhat the form of *V. Astartiformis*, but the greater elevation, convex umbo, numerous impressed lines, and more rounded base, distinguish it from that species. Rare.

Corbis staminea.

Suboval, convex, thin, with lamellæform concentric striæ, about thirty-seven in number; posterior side with a slight fold; beaks medial. Length 1. Rare.

1. *Lucina Mississippiensis*.

Orbicular, thin and fragile, with minute obsolete radiating lines; anterior side shortest, the margin obliquely truncated, angular above and elevated; inferior margins rounded; posterior end obtusely rounded; lunule profound; cardinal and lateral teeth wanting. Length 9-10. Height $\frac{3}{4}$.

This species very much resembles *L. subveza* of Claiborne, but wants the impressed line on the posterior side. Rare.

2. *Lucina perlevis*.

Orbicular, with lamellæform concentric lines, and very minute obsolete radiating lines, closely arranged; beaks medial; posterior end direct; cardinal teeth small. Length 4-10. Height rather less. Very rare.

The shells of this subgenus are orbicular, generally punctate within, often very thin and ventricose; cardinal teeth small and compressed, sometimes obsolete or wanting; lateral teeth none. *Lucina radula*, and *L. edentula*, among recent species, belong to this group.

1. *Loripes? turgida*.

Suborbicular, very thin and fragile, with minute concentric lines; beaks medial; umbo and summit prominent; margins regularly rounded. Height 6-10. Length rather more than 5-10.

2. *Loripes eburnea*.

Suborbicular, slightly oblique, convex, with minute closely arranged concen-

tric lines, and a few larger impressed lines; posterior margin truncated, direct; anterior end and anterior basal margins regularly rounded; posterior basal margin obliquely truncated; beaks nearest the posterior end. Length 6-10. Height 6-10 nearly.

Corbula intastriata.

Subtriangular, inflated, rostrated posteriorly; within with fine radiating lines: Length $\frac{1}{2}$. Very rare.

1. *Corbula alta.*

Subtriangular, profoundly elevated, slightly oblique; larger valve ventricose; summit very prominent; umbo broad; hinge plate thick, with large teeth; smaller valve somewhat flattened, angular over the umbonial slope. Length 6-10 nearly. Height 6-10.

Occurs abundantly about 8 miles N. E. of Vicksburg, and always water-worn.

2. *Corbula engonata.*

Triangular, inequilateral, small; valves nearly or quite equally convex, and with angular concentric ridges; posterior slope concave; umbonial slope carinated. Length 3-10.

Chama Mississippiensis.

Suboval, irregular, adhering; larger valve ventricose, with numerous irregular radiating lines, squamose inferiorly; upper valve with numerous concentric lines, with numerous small scales. Length $\frac{3}{4}$. Height 6-10.

Rare, and occurs on Dr. Smith's plantation, 6 miles N. E. of Vicksburg.

Pectunculus arctatus.

Short-ovate, convex depressed, with little prominent flattened radii, divided by a longitudinal impressed line towards the base; anterior margin truncated; posterior margin nearly rectilinear. Length $\frac{3}{4}$. Height 6-10.

Rare, and occurs on the bank of Yazoo river, about 14 miles from Vicksburg.

There is in the collection a valve of another species of *Pectunculus*, which is small, and resembles the young of *P. pulvinatus*.

1. *Nucula serica.*

Subelliptical, with minute regular concentric closely-arranged lines; anterior end acutely angular; posterior end acutely rounded; posterior side shortest. Length $\frac{1}{2}$. Common.

2. *Nucula Vicksburgensis.*

Obliquely subtriangular, convex, with minute obsolete radiating lines about the base; lunule elliptical, very large and impressed. Length $\frac{1}{2}$. Rare.

Arca Mississippiensis.

A species of *Arca* occurs in great abundance at Vicksburg, which Lesueur obtained many years since and named it, but I have forgotten the name, and know not whether he published it in Europe or not. It is rhomboidal, ventricose, with rather distant ribs in the right valve, slightly grooved in the middle; in the left valve ribs double and granulated; inner margin profoundly toothed. Length 8-10.

1. *Byssosarca lima*.

Trapezoidal, cancellated and granulated; radii largest on anterior and posterior slopes, but becoming obsolete towards the posterior extremity; end angular, margin above obliquely truncated; anterior end widely truncated, nearly direct; basal margin undulated, irregular and very variable in outline; hinge line crenulated under the beaks, profoundly toothed towards the extremities; cardinal area with lines strongly defined and angulated under the apex. Length 2 9-10. Rare.

2. *Byssosarca Mississippiensis*.

Trapezoidal, with numerous closely-arranged radiating lines, crenulated by fine concentric lines, the crenulation most distinct anteriorly, when the radii are largest; anterior end truncated or a little convex, direct: posterior margin obliquely truncated above; basal margin widely and profoundly arched; hinge line long, linear, minutely crenulated, expanded towards the extremities, and with prominent teeth; cardinal area with fine very closely-arranged lines, angulated under the apex. Length 1 6-10.

Differs from the preceding in having a longer hinge, finer radii, &c., and is a much smaller species and more abundant.

3. *Byssosarca protracta*.

Trapezoidal, elongated, with numerous radiating lines, some of which are double, and others alternated in size and finely crenulated; dorsal margin, parallel with the base; anterior margin truncated, posterior a little concave, oblique, end very acutely rounded or subangular; basal margin slightly contracted; hinge line long, rectilinear, very regular and gradually increasing in width towards the extremities from the apex; cardinal area wide, depressed concave, with a few fine impressed angular lines. Length $1\frac{1}{2}$. Height $\frac{1}{2}$ nearly.

A pretty species of which I found one valve only.

Avicula argentea.

Ovate-subquadrangular, thin and fragile, ventricose above, smooth and entire? anterior wing sharply angular; posterior wing not produced, rectangular at the extremity; posterior end angular, extending beyond the hinge line and much above the line of the base; anterior margin and base form a regular rounded outline. Height $1\frac{1}{2}$. Length 1 4-10. Not common.

Modiola Mississippiensis.

Slightly arched, elongated, ventricose, with rather fine closely-arranged radiating lines wanting on the anterior side; region of umbonial slope inflated posterior end acutely rounded; beak angulated posteriorly; substance of shell silvery and perlaceous. 2-10th from beak to base. Rare, except in one spot, where I obtained several specimens and fragments.

Pinna argentea.

Triangular, with straight margins and acute summit; compressed; substance highly polished and silvery; valves with longitudinal radii on more than half

the disc, about thirteen in number; anterior side with rugose, obtuse, oblique, finer and more approximate lines. Length $2\frac{3}{4}$. Rare.

Lima staminea.

Subovate, oblique, inflated, with fine radiating lines; ears very small, scarcely defined; posterior margin rectilinear. Height 4-10.

Very similar in outline to the Miocene species, *L. papyria*, but it is much smaller, and has more numerous lines anteriorly. Rare.

Pecten.

A valve of a small species was obtained. It is orbicular and entire, and resembles *P. calvatus*, (Morton.)

Ostrea Vicksburgensis.

Plicated; very irregular and adhering, the upper valve not flat, but swelling in an irregular manner. Height $1\frac{3}{4}$.

There is nothing peculiar about this shell, yet it is clearly distinct from any other species of the American Tertiary hitherto described. Common.

Pholas triquetra.

Subtriangular, depressed and angulated posterior to the middle, and with an impressed line from beak to base; surface with oblique lines anteriorly, and a few radiating towards the margin; posterior side reflected and with oblique lines meeting the anterior ones at an angle; a few obsolete radiating lines, one more conspicuous than the others, near the margin. Length 6-10. Height $\frac{1}{2}$.

I found one valve only, which occurred on Dr. Smith's plantation.

Madrepora Mississippiensis.

Rounded; cells numerous, very unequal in size, prominent, some of them very large, the sides with strong longitudinal lines, and the interstices with minute closely-arranged longitudinal lines; rays about fourteen, minutely crenulated on the edge, alternated with a short plate; centre with irregular grains. Diameter 6-10.

Madrepora Vicksburgensis.

Irregular, ramose, somewhat flattened; cells unequal in size, with a slightly prominent margin; submargin depressed, striated; rays alternated with a short plate; centre granulated.

A larger species than the preceding, the branches being sometimes an inch in diameter. Abundant.

Turbinolia caulifera.

Somewhat turbinate, rather long, with fine equal granulated longitudinal lines; base stem-like; rays ramose; larger end oval. Length 8-10. Rare.

Lunulites.

Two or three species of *Lunulites* occur in the Eocene of Vicksburg.

Lunulites Vicksburgensis.

Cup-shaped or somewhat conical, with very small cells, generally equal in size, subangular, and between each series is a minute impressed radiating line; interior striæ ramose and very minutely crenulated. Height $\frac{1}{4}$.

Descriptions of New Eocene Fossils in the Cabinet of LARDNER VANUXEM.

The following organic remains were obtained from Eocene rocks in St. Matthew's Parish, Orangeburg District, S. C., by Lardner Vanuxem.

1. *Nucula mucronata.*

Elliptical, convex in the middle, with equal, laminated, not closely-arranged lines, about seventeen in number; anterior side longest, the end acutely pointed; a submarginal furrow emarginates the base; posterior side slightly contracted, end obtusely rounded or subtruncated. Length 9-10. Height 5.

2. *Nucula carolinensis.*

Somewhat elliptical, convex, with rather closely-arranged prominent concentric lines, wanting on the posterior side, which is rather shorter than the anterior and regularly rounded at the end; anterior submargin with a narrow groove, bounded by a subcarinated line; anterior side narrowed and rather obtuse at the end. Length $\frac{1}{2}$. Height $\frac{1}{4}$.

3. *Nucula subtrigona.*

Subtriangular, ventricose, nearly equilateral, with numerous prominent concentric lines; anterior side pointed, flexuous; submargin angulated: anterior margin sinuous, end angular; ligament margin straight; basal margin profoundly rounded. Length $\frac{3}{8}$. Height $\frac{1}{4}$ nearly.

4. *Nucula calcarensis.*

Subovate, ventricose, with minute closely-arranged concentric lines; anterior side longest, pointed, slightly recurved, without a submarginal groove or fold; base profoundly rounded. Length 7-16. Height $\frac{1}{4}$.

1. *Cardita vigintinaria.*

Suborbicular, inequilateral, ventricose, with about thirty square radii, about as wide as the interstices; umbonal slope rounded; anterior margin subtruncated. Length 7-8. Height 7-8.

2. *Cardita carolinensis.*

Suborbicular? profoundly ventricose, with about thirty very prominent square radii, on the anterior side sharp, recurved and crenulated; lunule very broad and cordate, deeply impressed; hinge thick; pit anterior to the cardinal tooth small and profound.

This is a fragment of the right valve, about 5-8ths of an inch long.

3. *Cardita bilineata.*

Subrhomboidal, very inequilateral, with about twenty-four wide, flattened radii, with very narrow interstices, a carina in the middle of each rib, with an impressed line on each side of it; ribs crenulated anteriorly; carina somewhat tuberculated on the posterior side of the shell. Length $\frac{3}{4}$. Height 9-16.

4. *Cardita subquadrata*.

Trapezoidal, compressed; valves flattened in the middle; radii about twenty-five, broad on the disk, with very narrow interstices, and each rib with a crenulated carina in the middle; posterior to umbonal slope the ribs are smooth, not carinated; anterior side short, rounded at the end; posterior margin obliquely truncated. Length 6-10. Height 7-20.

5. *Cardita subrotunda*.

Orbicular, inequilateral, ventricose, with about twenty-eight rounded prominent narrow radii; ligament margin very oblique, short; ends obtusely rounded inner margin slightly crenulated. Length $\frac{1}{2}$. Height $\frac{1}{3}$.

Turbo biliratus.

Turbinate; volutions four, flattened above; body whorl with two distant revolving carinated lines, and intermediate fine revolving lines; volutions of the spire with a carinated line below the middle. Length $\frac{3}{8}$. Width $\frac{3}{8}$.

1. *Cerithium bicostellatum*.

Turreted; volutions eight or nine, angular and carinated below the middle; body whorl bicarinated. Length $\frac{5}{8}$.

2. *Cerithium siliceum*.

Turreted; whorls rounded below, contracted or concave above, and with revolving lines; suture profound. A fragment. Width $\frac{2}{3}$.

Infundibulum carinatum.

Depressed, with a suddenly elevated acutely conical spire, and a carinated line revolving at the suture. Length of fragment $\frac{5}{8}$.

All the preceding fossils are from the Eocene rocks of St. Matthew's Parish, Orangeburg District, S. C. Not one species of this locality is known in the lower Eocene of Claiborne or elsewhere, nor in the upper Eocene of Vicksburg, and therefore the relative age of the deposit is uncertain, but it unquestionably belongs to the Eocene period. Near this rock Mr. Vanuxem found quite a different class of shells, consisting of casts in indurated clay. The relative position is undetermined. Two of the shells are described and named *Tellina subequalis* and *Lutraria petrosa*.

Tellina subequalis.

Somewhat elliptical, nearly equilateral; posterior end acutely rounded; anterior slightly bent, end rounded. (A cast.) Length $1\frac{1}{4}$. Width $\frac{5}{8}$.

Madrepora punctulata.

Cylindrical, ramose with prominent cells; whole surface ornamented with fine, equal, punctate, impressed lines. Diameter $\frac{1}{2}$.

Locality. St. Mathew's Parish, Orangeburg, S. C. Vanuxem.

A species highly ornamented by the punctate vermicular lines. It occurs much larger than the specimen described.

In Vanuxem's collection there is a cast, from the Eocene near Long Branch,

N. J., resembling *Nautilus zig-zag*, (Sow.) It is more compressed than that species, and the angles of the septa appear to be in contact near the periphery. It is more like a Goniatite than a Nautilus, and may properly constitute a genus, which I propose to name *Nautilopsis*.

Nautilopsis Vanuxemi.

Length $2\frac{3}{4}$. Diameter 1 5-16.

N. zig-zag may be referred to the same genus.

The Society, in accordance with the resolution adopted at last meeting for business, proceeded to the election of a Recording Secretary in the place of Mr. Moss, resigned—when Mr. John Lambert was unanimously elected.

A letter was read from Mr. Wm. C. Redfield, dated New York, Oct. 19, 1847, requesting the loan of the Westfield specimens of fossil fish, in the collection of the Academy, for the purpose of description by Mr. Agassiz, in his Memoir on the American Fossil Fishes from the New Red Sandstone, now in course of preparation.

On motion, the By-law relating to the loan of specimens from the Museum, was temporarily suspended, and the request of Mr. Redfield complied with by the Society, under proper restrictions.

ELECTION.

Messrs. Charles Lennig, J. Dickinson Sergeant, Edward M. Kern, Charles Klemm, and Prof. James B. Rogers, all of Philadelphia, were elected *Members*; and

Dr. P. W. Korthals, of Leyden, was elected a Correspondent.